INSTINCTIVE STILLNESS IN BIRDS.

BY WILLIAM PALMER.

"NEARLY all hermits and holy men who live apart from the big cities have the reputation of being able to work miracles with the wild things, but all the miracle lies in keeping still, in never making a hasty movement, and, for a long time, at least, in never looking directly at a visitor."[1]

ACCORDING to one's knowledge and experience the subject of mimicry may be divided into a number of divisions but their limits are rather uncertain. In my opinion the dominant psychical feature in perhaps all mimicking birds is stillness in the presence of known or probable danger; and it is also an aid with its near relative, caution or slowness, in aggressive mimicry. The other features of bird economy necessarily involved are always subordinate to these, as will develop later. To give point to these facts the following instances, a few of many, are offered as illustrations.

While walking along a beach one summer a Spotted Sandpiper (*Actitis macularia*) and a single young were noticed some distance ahead. As I approached the place the old bird, with the startled manner characteristic of its kind at such a time, kept well ahead, but I could not find the other. Going back some distance I waited and soon saw it again with its parent. I repeated my quest and again failed to find the youngster. Going back once more and again seeing it rejoin the old bird I slowly moved forward keeping my eyes this time very intently on it and soon picked it up from the sand, an unwilling captive.

I once had considerable experience with the Pribylov Sandpiper (*Arquatella ptilocnemis*). The young could often be seen at a distance, but when approached and squatting it was almost impossible to distinguish them from the tundra vegetation. Finding one on one occasion I wished to photograph it as it lay. I had dropped my basket and camera on first seeing the bird which was not then under the care of its parents. Dropping my cap near the bird I slowly retreated backwards, obtained the camera and slowly returned to the spot, but the bird had moved. Failing to find it

[1] Kipling, in 'The Miracle of Purun Bhaget' (The Second Jungle Book).

and leaving the cap as a center I walked in a wide circle and then began to spiral toward it. Using the utmost carefulness and straining my eyes I found my bird and made the exposure. As in all other cases its colors and markings almost exactly matched the vegetation; it is really a wonderful mimic, and it required very careful work to distinguish it, but once found it seemed more conspicuous, and this is usual in similar cases, for with time our eyes become better accustomed to the contour of the squatting bird.

On the same island, St. Paul, I once stood for a long time knee deep in cold water looking for some young Phalaropes (*Lobipes lobatus*) which I knew were clinging to the scanty grass and, as it proved, not three feet in front of me. Yet a movement on their part would have instantly betrayed them, my eyesight was excellent and I knew what I wanted and expected to find.

These few examples represent a common experience of field naturalists familiar with this group of birds. They are also characteristic of young Terns and Gulls, of Quail and numerous other species, but not always of the adults.

Seeing a Least Bittern (*Ixobrychus exilis*) flying over a marsh one dull afternoon I marked the place, but upon pushing there in my skiff I was utterly unable to locate it. Later I put up another and marking where it had alighted had the greatest difficulty in finding it clinging motionless with bill almost erect, to a stem of wild oats (*Zizania aquatica*).

The following interesting experience occurred in Florida. I had been walking among the pines with my gun and had slowly approached the backwater of the Kissimmee River where the water had overflowed the short grass well back of the usual shoreline. Here I soon noticed a Louisiana Heron (*Hydranassa tricolor ruficollis*) standing in a few inches of water near a small clump of scrub palmettoes (*Sabal* sp.) and at once conceived the idea of trying to find out how near I could get to the bird. Using the clump as a blind I gradually moved to within about sixty feet. Waiting a while to notice the bird and to allay its fears, for it had evidently detected me, I sat down on the grass and slowly worked myself to one side of the clump in full view of the heron and not over forty feet away. Here I sat for some time lounging, first on one side and then on the other, at the same time working myself gradually nearer

to the water, the heron all the time standing upright and immobile with its breast toward me, the neck upstretched and the bill pointed skyward. I could plainly see the irides, but the bird, now about twenty-five feet off, stood absolutely still for perhaps twenty minutes until I arose and then it flew off.

A friend recently told me of a singular and most unusual instance so far as man is concerned. A party of hunters at Catlett's station in King William County, Virginia, had started a Wild Turkey (*Meleagris gallopavo silvestris*) in the woods which flew out over an old field of sage grass (*Andropogon*) and alighted into it. Marking the distance and calling the dogs they worked toward the place and after considerable search failed to find the game until suddenly one of the dogs came to a stand. Even then no turkey was visible and they were about to give up the attempt when one of the hunters who had stood in one place watching the men and dogs, felt his hand touch something. Looking down he was surprised to see the turkey at his feet crouching and motionless with outstretched neck. It surely deserved a better fate than to be promptly seized by the neck.

On the side of Mount Shasta in California on a large fallen tree trunk a party of five saw a Blue-tailed Grouse (*Dendragapus obscurus sierræ*) in a motionless and crouching posture with neck outstretched. It permitted Dr. M. W. Lyon, Jr., and myself to get on the base of the tree and to slowly walk within twelve feet before it suddenly took flight down the mountain side.

Another instance of this kind has been told me by Mr. N. R. Wood. He was in a field watching a hen that had a brood of chickens when an approaching hawk was noticed; uttering her note of alarm the chicks instantly scattered into the surrounding vegetation, except one, which was probably the last to take alarm and judging the danger imminent stiffened at once into the characteristic position. In another case all of a flock acted in a similar manner.

Walking through a field of short grass in Virginia I noticed some distance ahead a covey of half-grown Quail (*Colinus virginianus*). Approaching somewhat carelessly, but with the intention of ascertaining how near I could get to them, I was surprised to find that I could not see the birds. Standing still I slowly scanned the ground over but without success until suddenly I caught the blinking of

an eye. On the instant it seemed that the bird realized that I had seen it for immediately it took flight.

We have a canary, a dark bird with a streaky plumage, that we often allow the freedom of the kitchen and pantry. At first it was greatly averse to being handled but now offers little resistance if caught. It often comes when called yet occasionally it is perverse. At such times when looked for it is generally motionless and will when seen sometimes utter an inquisitive note, but is usually mute. If it happens to be on a dark object, or in the shade it is sometimes overlooked and will not answer, but will allow itself to be picked up. If, however, it is on an object of a light color, or in the light, it acts differently and when approached will suddenly take flight, run off, or hop on to a finger. In its habits it is very unlike the ordinary yellow bird, is very intelligent and seems instinctively to realize its unusual coloration.

On the Potomac River, above the Great Falls in Virginia, I once surprised a female Summer Duck (*Aix sponsa*) with a brood of eight quarter-grown young. In her excitement she fluttered greatly and uttering loud cries of alarm soon made off. Meanwhile the young paddled swiftly to the shore where I saw all land some fifty feet up the stream. I hurried to the spot but failed to see any of them after they had reached the shore.

To surprise a Ruffed Grouse (*Bonasa umbellus*) with little ones is quite an experience in still mimicry. Though the twelve or fifteen young may for a few moments be running in every direction, and knowing that all are within a few feet crouching and quiet, it is a difficult matter to pick up more than one or two, but more probably none. How often one has walked to within a few feet of an unsuspected grouse, or Woodcock (*Philohela minor*), only to have it fly off suddenly, yet one is rarely seen before it starts, and it is exceedingly difficult to find one if it remains quiet even when we know about where it had alighted. Perhaps the best example of this immobility and then sudden flight at the possibly critical moment, at least where man is the intruder, is afforded by the American Bittern (*Botaurus lentiginosus*), as its color and fine shading in its marshy environment with its almost erect motionless attitude is a fair illustration of my subject and suggests at once that the coloration of the bird assumed its present well known distinctive

features because of its association with its present type of environment, habit and protection through its happily mimetic values being the main incentives to the direction of color development during the early formative stages of the species, the unfitted grades of variation being weeded out by absorption into the general mass of the species, or destroyed.

Wounded birds are often hard to find as the experienced are well aware. As a good example I select the following incident told me by Mr. H. S. Barber. His brother had made a long shot at one of three Great Blue Herons (*Ardea herodias*) in a Florida marsh. The ball had broken both wings and the bird dropped helpless. The boys rushed onwards to secure their game but to their great surprise were unable to find it and could not account for its disappearance. Finally one of the boys started to turn over a pile of supposed rubbish with his foot when to their great surprise it proved to be the wounded bird that now tried to make off.

I was hunting turkeys in Virginia. My companion and myself had started out before daylight and had separated in the woods about where we expected the turkeys were roosting. I had slowly walked down a slope in a wide ravine, listening, and lingering for a little more light, and finally leaned against a large tree with my hands in my pockets, gun under my arm and my eyes trying to penetrate the slowly vanishing gloom. I thus stood, still and somewhat chilled, for at least thirty minutes with eyes and ears expectant when behind me I heard the cautious pit-pat of feet on the leaves. Keeping my body nearly in the same place I slowly turned my head, at the same time withdrawing my hands for action. Behind me in full view was the best and most interesting gunning experience of a lifetime, a flock of at least a dozen turkeys, the nearest not over twenty-five feet away, the farthest well within gunshot. But for my next movement I have no doubt that the whole flock would have walked by my motionless figure. In this instance but very little mimicry is involved, the general resemblance of my quiet form to the surrounding tree trunks preventing me from being noticed because of the absence of motion on my part.

Mr. Nelson R. Wood has given me the following instance that illustrates another phase of these quiet moments of bird-life. A gunner in Florida had gone out to hunt Wild Turkeys (*Meleagris*

gallopavo osceola). He was standing in the corner of a fence when a turkey, accompanied by a flock of little ones, jumped through a gap on his right. They slowly advanced toward him and it was only when the old bird was nearly opposite him that he was evidently noticed. Without alarm she continued on her way past, and but a few feet off, until the young had reached the opposite fence when, suddenly uttering her note of alarm, the brood instantly scattered through the rails while the mother bird flew off over them. The man was so astonished at the arrival of the birds, and then at the apparent nonchalance of the mother, that he entirely forgot his object and did not recover his presence of mind until the whir of wings showed him that he had been outwitted.

A friend and myself were recently eating our lunch on a narrow sandy beach of Chesapeake Bay. An adult Spotted Sandpiper soon came quietly toward us picking up food on its way. When about twelve feet off it noticed us for the first time, hesitated and viewed us intently and motionless for what seemed a long period and then retraced its steps for a short distance. Once more it returned, examined the strange coatless and motionless things in its way and then went back, occasionally picking up food, but soon facing us again. A few Turkey Vultures (*Cathartes aura septentrionalis*) had been sailing above the cliffs behind us and once in a while a shadow would pass up or over the beach. As the bird viewed us from its last stand it soon noticed a vulture coming near and instantly turning with its tail toward us, head and bill obliquely pointing to the water and crouching a little, stood as if turned to stone while the shadow passed within a few feet. The whole performance, so near and unusual, was a very pretty and unexpected exhibit of mimicry with its attendant stillness. The color of the bird's back was in perfect harmony with the wet sand and it certainly seemed doubtful that it could have been seen by a predatory enemy except when it was in motion.

Stillness is not a characteristic of birds alone, as the following instance that occurred on St. Paul's Island, Alaska, shows. Wandering over the island on a bright day I had reached the large lake toward Northeast Point and was walking on its narrow beach when I noticed the track of a Blue Fox, and finally caught sight of it as it rounded one of the numerous points jutting out into the

water. Apparently the fox did not notice me for it jogged along easily and I finally lost sight of it when it disturbed a large number of gulls which had been resting on a larger point of sand. When I reached this place all the birds had left and I could see nothing there except, as I thought, two stones. I therefore crossed the sandy triangle at its base and reached the opposite side. Here I was surprised not to see the tracks again and began looking for the fox. It had not passed me and no return tracks were to be seen. I hesitated awhile, looking in every direction, and finally determined to make sure of the 'stones' which were then easily within gunshot. When about thirty feet off the rusty summer-coated fox arose and began running back over his incoming tracks. But for my wonder and then my curiosity I might have missed my specimen. Foxes in out of the way places have been known to play hide and seek, as it were, even behind a plant stalk and to make off when they found that they were discovered. Fawns and young antelopes squat on the ground like young waders, and for the same reason, mimicry and stillness, inability to do otherwise, for movement might attract instant unfavorable attention.

A Gray Squirrel spread and flattened motionless against the trunk of a tulip poplar is effectively a mimic on the irregularly colored gray bark against a flying or stationary hawk and often against a gunner. On the other hand a moving squirrel can be readily located by a perching hawk. That sudden movement causes alarm is shown by the well known fact that weasels, mice, rabbits, and many other species may play about and even cross the feet of a person who remains quiet, but upon moving they rapidly disappear.

A party of Audubon people had started a Henslow Sparrow (*Coturniculus henslowi*) in an old field. It flew to a clump of scanty leaved bushes where about a dozen of us surrounded it. For fully fifteen minutes the party watched it perched motionless about four feet above the ground. It would not fly upwards for the species rarely does except when migrating. It would not fly off on a level at the usual height of its flight for we were in the way. It could not reach the ground as there was not space for its usual downward flight and so it remained perched immobile and but a few feet from the nearest person as long as any cared to stay. In

numerous cases birds when alarmed will fly into trees or bushes and either pass rapidly to the opposite side and thus escape, or imitate the leaves by remaining quiet.

Many more instances of absence of motion at a critical moment might be given, but almost everyone with a wide and diversified experience with birds has had many opportunities of becoming interested in these phases of their life. That the bird does not reason is shown by the fact that it may stiffen into its mimicking position of immobility even when its attitude is incongruously out of place with its surroundings. However, the facts should be studied, not in single instances, but by observing the general habits and the natural economy of the species in its usual environment and in its attitude against its usual enemies. On the whole these occasional motionless postures are distinctly of advantage to the species and thoroughly ingrained into their life, and if at times seemingly fantastic and absurd to us, are really very effective when used against the ordinary and entirely natural causes which influence them. Man with his ideas, practices and weapons is but an artificial product and has had no part in shaping these peculiar habits of bird-life.

When ground birds are approached after a sudden flight they may get up wild, run off rapidly, or remain quiet and are then often extremely difficult to find. Color in woodland has an uncertain and slight value usually because lights and shadows are often extremely complex and broken; while the accidental and complex variation of size and shape of the details of the ground cover is very effective in favor of the hiding, or setting, bird.

Many birds will not eat unless their food is in motion. A motionless insect has little or no attraction whereas movement at once tempts the appetite. Simulation of life by using a wire and a dead mouse will sometimes induce a captive snake to eat. I have seen a mother bird lamenting the dangerous position of its offspring cease in her grief because a tempting morsel by its motion attracted attention. Motion attracts the enemy, stillness does not, unless some other feature, as some defect, or unusual condition of the environment, or view, places the mimic in jeopardy.

It was often an object with me to try to ascertain how close I could get to a bird in the open. I tried many ways and at last

became quite successful. It was found in a large number of cases that by walking in a straight line, slightly crouching and taking short quick steps without wobbling or swaying, it was often possible to get much nearer than by other means. In most cases the bird not noticing or understanding the slight increase in size as I drew nearer, nor being influenced by irregular side motions, would remain perched for quite a while and sometimes appeared interested. In other cases I found that by not walking directly toward a bird but viewing it occasionally out of the corner of my eye, it was possible to approach quite closely and even to walk around it. Confidence and curiosity may be induced by cautious movement so that even a sitting bird can be stroked. With care one can drive flocks of sandpipers along a beach while but a few feet behind them as well as single birds.

It is a rare experience to stalk a Wild Turkey but rarer still to stalk a flock. On one occasion I heard turkeys far off in some rather open woods soon after sunrise and debated with myself the possibility of getting within range. Approaching them, but still some distance away, I took care to move in a straight line while in possible vision. At last I had only to climb one small hill after crossing a flat wet ravine and though I really had but little expectation of working myself near enough for a shot I concluded to attempt it. Long before I had been in sight of the turkeys, as I supposed though I had not seen them, I had dropped on my knees using my left hand as one foot and the gunstock in my right as another and keeping my head down made fair although slow progress. The turkeys were very suspicious, but evidently unwilling to allow such a strange and slow-moving creature to drive them away, so their inquisitiveness, or indecision, influenced them to permit too near an approach.

In Aggressive Mimicry the following will illustrate the importance of stillness and its relative, cautious movement. A heron walking along the water's edge by its motion drives away the minnows swarming in the shallows, but if it stands motionless they slowly return and the bird readily obtains its meal. If its forward movement is slow and stealthy the movements of the fish will correspond, while quicker or uncertain motions cause a different action in the fish than the more effective one. Putting myself in the place of the

heron and remaining still I have found that I could sometimes touch the fish and even have them nibble at my finger or toe, while an unexpected and sudden motion on my part would cause them to rapidly vanish. The cautious movement of the heron inviting confidence is the more readily productive of good results, while it is doubtful if the escaping fish in any degree realize that one of their companions has disappeared. They merely escaped a sudden motion of something larger than themselves, their own memory and knowledge being of the smallest.

Dark-bodied, day-feeding herons obtain their food almost entirely where the fringe of vegetation, sedges, bushes, or more distant tree tops, make a background and prevent the shape of the birds from affecting the skyline as seen by the prey. This is to a much less extent the case with the light-bodied and light-fronted species which are apt to feed largely at a distance from trees and bushes. In this latter phase of aggressive mimicry, whether the prospective victim is fish, reptile, or batrachian, stillness and caution are quite essential and the value of protective and simulative coloring is the same, for light colored birds, when motionless, harmonize with the colors of the sky as seen from the position of the prey. The sharp eyes of the heron search every likely spot; its absence of motion invites confidence, possibly some inclination to move; it has time to examine well, while its colors and markings, as viewed from in front and below, blend perfectly, or at least sufficiently, with its usual background, and an adequate amount of food is secured. The balance of trade is always in favor of the aggressor if his stock of patience is sufficient. The light patches and streaks on the neck front of some herons may be explained as a phase of aggressive mimicry. They serve to break up the contours and colors of the bird and suggest, instinctively, openings and irregularities in the background of vegetation.

Color mimicry would seem to be a station, somewhat different in different species, at which the color development was largely left at a very early period of its life's history. Assuming that the archaic ancestral bird was of a uniform tint with unspecialized feathers it would seem that as the specialization of the feathering developed so the color gradation tints necessarily came into effect, not for mimicry, however, but as a physiological result, the functions,

density, thickness, position, etc., determining. As the developing species or groups broadened out into different environments and thus came into interrelation with varied and numerous factors and enemies those best fitted to escape, however slight the difference, became collectively the progenitors of the mimicking and non-mimicking groups or species of later times. It would seem that the fixation of protective color gradation characters in feathers must have been an early one; in fact there is abundant good reason for believing that bright colors and feather specialization are more advanced conditions and of later development than the sober, simpler tints and feather shapes of mimicking birds. As color, or its absence, when the bird is in motion, is of little or no value in affording protection, it seems evident that the habit of keeping still in the presence of danger, real or fancied, must have been at a very early period instinctive and necessary in the developing groups of nonpredatory birds, an instinct antecedent to the specialization of feathers and probably derived from the weak, unspecialized and evidently reptilian-like ancestors. It may therefore be contended that colors in birds were not determined suddenly but by slow gradational stages as a result of increasing experience and forming habits, character of the food and the slow unconscious fitting to the environments. This instinctive habit of stillness seems to be an absolutely necessary feature of the life of the young of practically all ground birds, but often absent in the adults, as in gulls and terns. A young tern, for instance, instinctively remains motionless on our approach, and we may be sure that its ancestors have always done so also, but if handled for a time, it forgets its simulative caution and does not readapt itself unless released and allowed to escape. Its mimetic instinct becomes to a large extent lost in an unnatural condition of safety and captivity, because its life is spared, which is also an unnatural act.

Nestlings, when their hunger is appeased are quiet and crouching, they instinctively and quickly learn and obey the warning notes of their parents. They are easily aroused by the motion of the arriving parent, and sometimes by that of an intruder, but hunger and its probable alleviation is the cause. Unnecessary motion by the nestling is possibly dangerous to it, it may attract unfortunate attention, consequently we find that the parents are constantly

warning and the young are always being subdued. In this early training we can see the germ of individual mimicry, the necessity of keeping still, motion in the young being only permitted as the parents will. With ground birds the instinctive habit of stillness is stronger and more individual in the young. But with the functional development of the wing growth the tendency to stillness is gradually lost in many species for they can soon escape by active exertions.

Much could be written about the power of the eyes. Sometimes a bird can be easier approached by not looking at it. They seem to know instinctively that they are seen when one looks at them directly, but if they are under the impression that they are unseen one often has a better chance to get near them or to have them approach. As a boy I fooled my first crow, after an experience of repeated failures in attempting to shoot one, by walking by it, gun under my arm and looking everywhere but at the bird, and many instances of the kind might be given.

A protectively colored adult bird endeavors to escape imminent danger from an approaching predatory animal by assuming a quiet and crouching position while it is also watchful. The bird always has it in its power to escape suddenly, a common habit, provided it judges the danger point correctly; but a young wader, for example, has no such chance; it keeps motionless while in danger because that is an inherited characteristic and a result of the long experience of its kind under such circumstances. Its only method and instinctive hope of escape is by keeping still, together with its color resemblance to the surrounding ground, as any movement may be fatal, its enemy being always on the alert. But in rare cases its stillness may be fatal, as is evidenced in the following instance given me by Mr. S. M. Gronberger. With two friends he had landed on a rocky islet in Lake Roxen in Sweden which was inhabited almost solely by the Common Tern (*Sterna hirundo*) and the Common Sandpiper (*Actitis hypoleucos*). Attracted by the numerous adult birds they wandered over the islet and it was only the slippery condition of their shoe soles that showed them that they had unwittingly been crushing many eggs and young birds which up to that time they had not noticed.

A moving predatory bird or mammal has a very slight chance of

seeing a mimicking species unless it moves within its range of vision. Animals have the instinctive faculty of remaining motionless on or about the color that best suits them. Those which remain on areas distinctly of contrasting color with themselves necessarily incur a greater risk of being captured, therefore in the vast majority of present cases the mimicking bird is almost constantly on the ground color that harmonizes with its own coloration, and of which it is a mimic. One of the apparent exceptions to this that I have met with was in finding a young King Rail (*Rallus elegans*) which I captured in grass. Here the blackness of the bird was in great contrast to the green grass but the bird was astray and hungry. In the rails the young are black and at first thought it might seem that they are not protectively colored. As a matter of fact the black color fits in well with their true environment which is generally a blackish wet mud with numerous protective shadows of overhanging vegetation.

The power of mimicry is unconscious in the bird, that is, instinctive, a matter of acquired habit, though one readily gathers the impression that in many cases the bird must know that its coloration has a protective or simulative value. There is nothing protective about a Crow (*Corvus brachyrhynchos*) in its coloring, the bird is always evident, assertive and able to care for itself. A Quail (*Colinus*) is protectively colored and of retiring habit, it has learned as a species to keep still, trusting instinctively in its color similarity to its environment to prevent its enemy from seeing it, but on a closer and more dangerous approach it has other means of probable escape. It is of course impossible to believe that the bird is fully conscious of its simulative powers for, as in the case of a day old wader or tern, it has not had sufficient experience, but the instinct is there and we might for want of a better term call it instinctive reason as distinguished from pure reason which is based on thought and therefore deductive. To give an example. I have been lost in the woods. Realizing that condition I have looked about, instinctively determined, with no thought or reasoning, on a direction and made my way out with no difficulty. Yet on some occasions where the situation was very much more difficult or complex I have pondered and reasoned. It seems reasonable to assume that the bird follows a tendency which has proved successful for many generations of its ancestors. When not successful there is

of course no danger of that experience being transmitted to future generations, consequently stillness and protective mimicry as we see them exhibited is a record of innumerable successes only. Hence the habit once acquired in a very slight degree has, evidently because of its invariable success, been transmitted in a slowly intensifying degree and as a valuable attribute of nonpredatory forms to the descendants as we know them. Mimicry we may say is the result as well as the cause of the survival of the fittest, the failures having been eliminated.

Protective mimicry of the kind here considered, in combination with stillness, is an epitome of weakness and, even in this sense, the result as well as the cause. It is absolutely necessary for the preservation of many of the weaker and more defenceless species. It illustrates dread, lack of combativeness and aggressiveness and inability when exposed to danger to do much else of advantage. Mimicking species are usually quite common and, as we often speak of it, tame, and they propagate rapidly. On the other hand their predatory enemies have also advanced in their mimetic tendencies, usually aggressive.

It may be noted here that the parents in many cases, especially among ground species, successfully attract the attention of the marauder by feigning lameness and then using their power of flight to escape the deluded enemy. In perhaps all cases the warning cry of the parent bird is sufficient to functionize the, until then, latent mimetic propensity to stillness of its young.

In nonpredatory birds in which no simulative mimicry is evident, or very slight, the first law of preservation is unquestionably flight; they escape, or endeavor to do so, at the first indication of danger: while in birds whose colors and habits are in any way simulative and therefore entirely or largely protective, the first law of preservation is stillness even when there is great danger of being captured.

The point that I have here endeavored to emphasize especially is that protective resemblance (environmental mimicry), as to color, markings and shadings, is of little value generally unless it is conbined with one other feature, the dominant factor, stillness.